David Cacorovski (100874115)
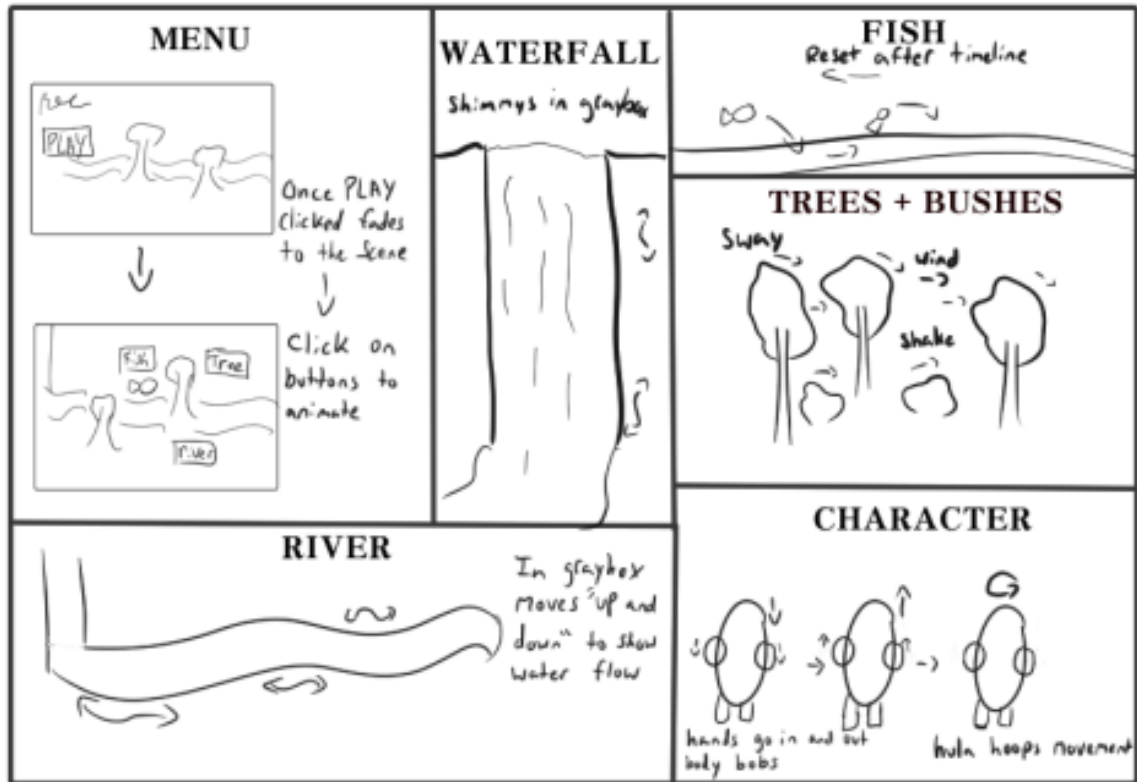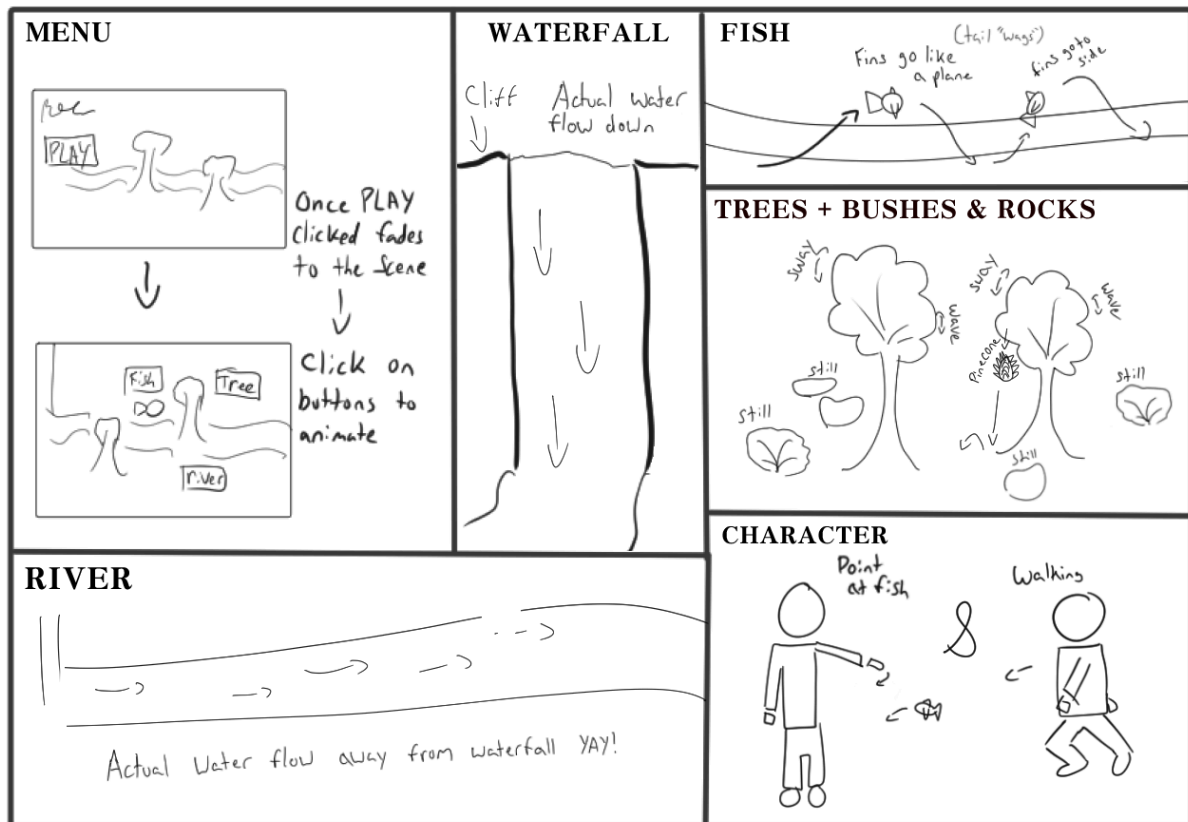*Rachel Marinic (100876624)*
Miro: https://miro.com/app/board/uXjVLa_dGcs=/?share_link_id=95103102614

Storyboard 1:

Updated Storyboard 2:

From our first storyboard, we now have a more exact vision of our animation. We added a couple secondary animations to a couple of our objects to make them lively such as the fish's fins moving and its tail moving side to side, as well as a pinecone falling from one of the swaying trees. We also made all the water in our scene instead of "moving up and down" and "shakes" actually flow with a video texture (we dont know how to do actual water in blender so we did the next best thing).

Flowchart 1:
We decided to do interactive animations. As seen in the storyboard, there are buttons with the things that have been animated and then they will follow the storyboard animation. The flowchart would be as simple as:

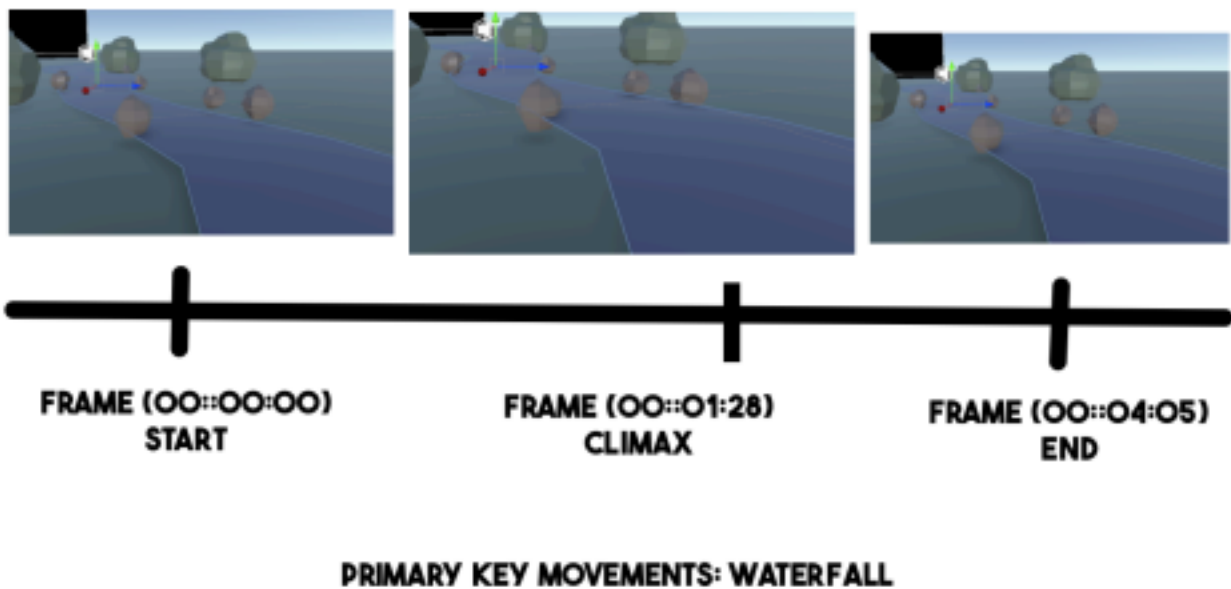Button is pushed > Associated animation is played

Updated Flowchart 2:
We have stuck with the plan of interactive animations. We have made a more detailed flowchat showing the sequence of events:
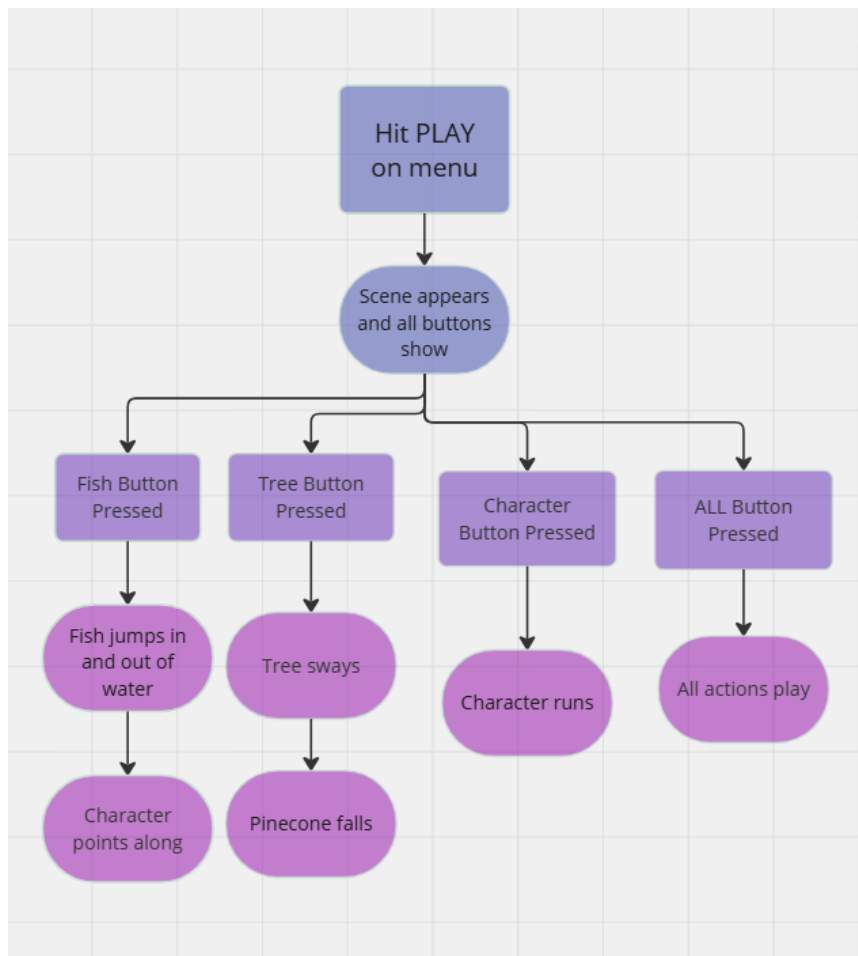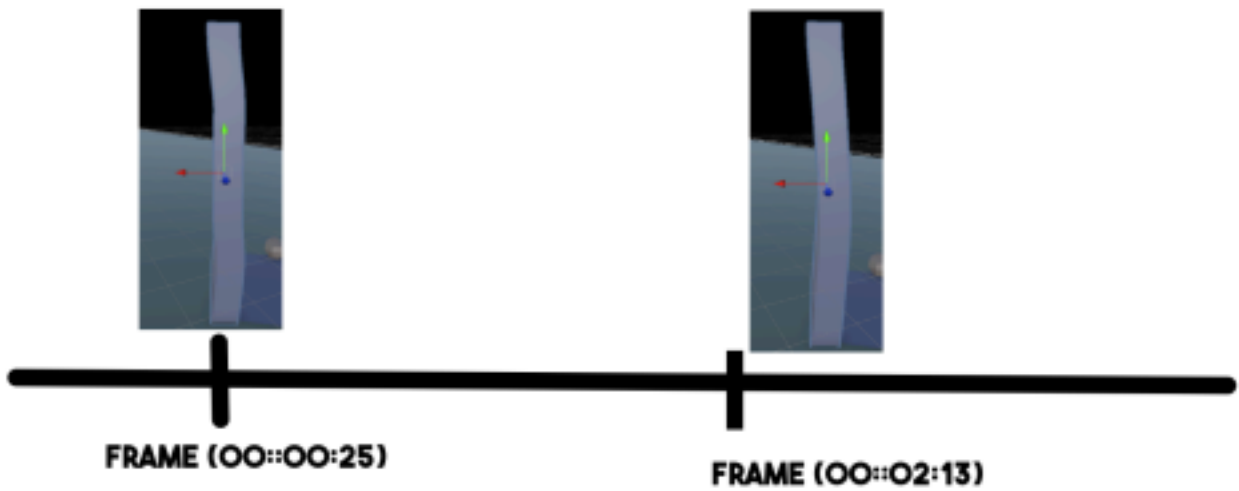
Write a short description of the intended narrative of the animation and any additional Discipline specific requirements.

Our character stumbles into a peaceful forest with only a couple fish jumping in the river and the wind making the trees sway. They find it a perfect spot to just relax and do whatever they feel.

Timing Chart 1:

FRAME (OO::OO:OO)
START

FRAME (OO::O1:28)
CLIMAX

FRAME (OO::O4:O5)
END

PRIMARY KEY MOVEMENTS: WATERFALL

FRAME (OO::OO:25)   FRAME (OO::O2:13)

PRIMARY KEY MOVEMENTS: WATERFALL

FRAME (OO::OO:18)   FRAME (OO::O1:O2)
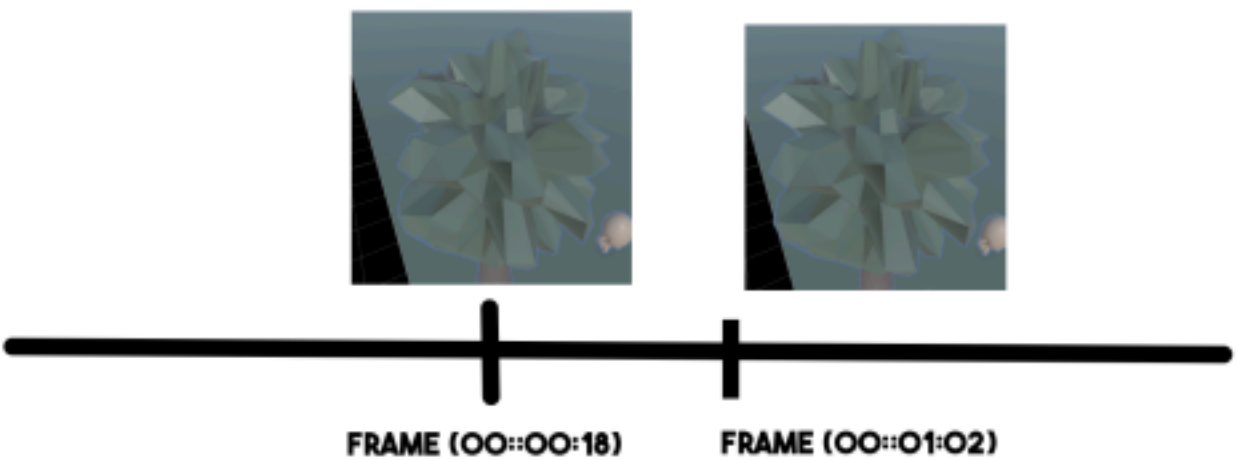
PRIMARY KEY MOVEMENTS: CROWN

THERES SOME ROTATIONS, SCALING, AND MOVING THE POSITION
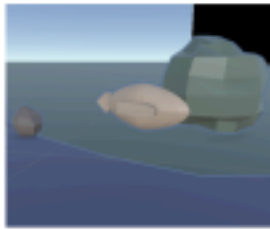
FRAME (OO:OO:O5)
PEAK OF JUMP

FRAME (OO::OO:17)
FALL BACK INTO WATER

FRAME (OO::O1:O7)
JUMP BACK OUT

PRIMARY KEY MOVEMENTS: WHOLE FISH

FRAME (OO:OO:O7)
SQUASH AND STRETCH

FRAME (OO::O2:O9)

FRAME (OO::O3:16)

PRIMARY KEY MOVEMENTS: MAIN PART BODY
SECONDARY KEY MOVEMENTS: HANDS

Updated Timing Chart 2:

FRAME (00:00:09)

EASE IN

FRAME (00:00:20)

SQAUSH & STRETCH (ARMS)

FRAME (00:02:21)

EASE OUT

PRIMARY KEY MOVEMENTS: MOVEMENT AROUND CIRCLE (SPLINE)

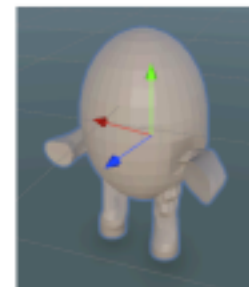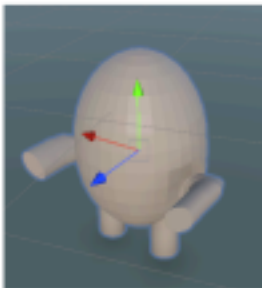**SECONDARY KEY MOVEMENTS: ARMS SWINGING**

FRAME (00:00:10)

PEAK OF JUMP

FRAME (00:00:17)

FALL BACK INTO WATER

FOLLOW THROUGH

FRAME (00:01:07)

JUMP BACK OUT

PRIMARY KEY MOVEMENTS: FISH JUMPING IN AND OUT OF WATER

SECONDARY KEY MOVEMENTS: FINNS MOVING
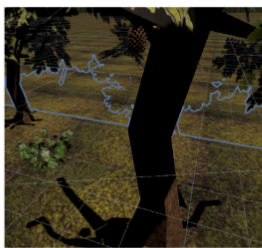
FRAME (00:00:00)

PINECONE STEADY

FRAME (00:00:24)

PINECONE FALLING

FRAME (00:01:20)

PINECONE FELL DOWN

PRIMARY KEY MOVEMENTS: LEAVES SWAYING

SECONDARY KEY MOVEMENTS: PINECONE FALLING

Critical Analysis Framework:

Re-visit your Initial Impressions

● For each of your references
    ○ Document any differences between how you originally thought about them and how you think about them now.
    ○ What makes the animations interesting to you now?
● Animation Principles
    ○ What animation principles can you identify that are important to the chosen animation and why?

Dynamic Components

● Compare your initial references with your final deliverables critically, what works, what doesn't work, what is different?

Animation Timing

● Showcase, explain, and justify your timing charts for your references

Core Animation Concepts

● What animation techniques are utilized? (e.g., steering, LERP, morphing, paths, splines, IK, Blending, Motion-Capture) and what evidence supports your claim?

Usability & Engagement

● How do the animations contribute to the overall experience?
● Do the animations enhance player engagement, or do they distract?

Technical Considerations

Compare your final deliverables to your initial prototype:
● Observe how the character transitions between different animations.
● Describe the smoothness, speed, and naturalness of these transitions.
● How does the game handle interrupting animations or blending multiple animation sources?
● Are there discernible layers of animations being blended
    ○ (e.g., a character running and reloading a weapon simultaneously)?
● Document the transitions with control
    ○ i.e. when you tell the character to move forward or reverse or change direction, do they abruptly change animations or is there a smooth transition?
    ○ What are the advantages and disadvantages to the chosen method?

Framework Answers:

Re-visit your initial impressions:
- Originally while doing the graybox we were thinking about our animations in a very simple way. For example the fish jumping in and out of the water. We realized we would need to add much more to it than just moving the fish up and down. Making the fins and tail move along with it makes it more realistic.
- The animations are interesting to us now as we are just more happy with the way t\hey have turned out. They make the environment feel more filled out and we are satisfied with the end results.
- Some animation principles that are important to our animations are appeal, timing and secondary actions. We have a very fully decorated scene with lots to interact with. Timing is key to some of our animations as gravity has a huge role in them. This also falls into the slow-in, slow-out principle with things falling faster than when the object was at its peak height. Secondary animations are important too because it gives the user more to notice about the animation.

Dynamic Components:
- A lot worked based on our initial references. We have the water flow, trees waving in the wind and a fish jumping around in the water. We decided to add a couple secondary animations after stage 1 to make the animation less simple and to add something more to them.
- We ended up adding a ripple effect to our river in our final deliverable. Through code, as the rain falls and collides with the river, a ripple effect will play. We also added a mist particle effect to the bottom of the waterfall to give the waterfall more realism.

Animation Timing:
- Above we have our timing charts from stage 1 and stage 2. Our timing charts show exact times for when each animation does what when a certain button is pressed (The "ALL" button being all the timing charts combined). It highlights all key elements during each button and how it may lead into the next action. The timing chart is completely justified with our scene.

Core Animation Concepts:
- We made use of IK and splines. We used IK on our character's arm to make him point at the fish as it jumps across the water. We also used splines for our character's movement direction on where he walks. We used camera locomotion to put more focus on the animation being seen, when the player presses a button, the camera will zoom into the animation and get a better view of it.

Usability and Engagement:
- The animations contribute to the overall experience through player curiosity and having the player notice something new each time an interaction is played.
- The animations enhance player engagement. This is because the animations are all a part of button interaction. This makes it so one animation plays at a time and won't distract the player too much while looking at our scene.

Technical Considerations:
- The character transitions between different animations once a certain interaction button is clicked.
- These transitions can be smoother at certain times then others as it heavily depends on the player and when they click each interaction.
- There are no blending animations or interrupting animations involved with our animation.

- There is also no user controlled movement in our animation other then the buttons to tell the character when to move.

Assets used not by us:

Forest Grove (Dimitrios Savva & Jarod Guest):
https://polyhaven.com/a/forest_grove

Basic Low Poly Human Rig:
https://www.turbosquid.com/3d-models/basic-low-poly-human-rigged-model-1641989

Footage Of Waterfall:
https://www.pexels.com/video/slow-motion-footage-of-multnomah-falls-7297870/

Top View of River:
https://www.vecteezy.com/video/33537701-earth-s-majestic-wonders-a-breathtaking-journey

Pinecone Reference:
https://blender.stackexchange.com/questions/41442/how-to-create-a-pine-cone

Fish Reference:
https://blender.stackexchange.com/questions/304525/how-to-model-a-simple-fish